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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-CE-21-AD; Amendment 39-12926; AD 2002-22-02]

RIN 2120-AA64

Airworthiness Directives; Pilatus Britten-Norman Limited BN-2, BN-2A, BN-2B, BN-2T, and BN2A MK. III Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to all Pilatus Britten-Norman Limited (Pilatus Britten-Norman) BN-2, BN-2A, BN-2B, BN-2T, and BN2A MK. III series airplanes. This AD requires you to repetitively inspect the bottom corner of the engine mount bracket for cracks and replace any cracked bracket with a new one. This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for the United Kingdom. The actions specified by this AD are intended to detect and correct cracks in the engine mount bracket. Such a condition could cause the engine mount assembly to fail, which could result in the engine separating from the airplane and lead to loss of control of the airplane.

DATES: This AD becomes effective on December 20, 2002.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of December 20, 2002.

ADDRESSES: You may get the service information referenced in this AD from B-N Group Limited, Bembridge, Isle of Wight, United Kingdom PO35 5PR; telephone: +44 (0) 1983 872511; facsimile: +44 (0) 1983 873246. You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-21-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

SUPPLEMENTARY INFORMATION:

Discussion

What Events Have Caused This AD?

The Civil Aviation Authority (CAA), which is the airworthiness authority for the United Kingdom, recently notified FAA that an unsafe condition may exist on all Pilatus Britten-Norman BN-2, BN-2A, BN-2B, BN-2T, and BN2A MK. III series airplanes. The CAA reports two occurrences of extensive cracks being found on the bottom corner of the engine mount bracket between the attachment flange and the main bracket. The cracks were found during regular scheduled maintenance.

The manufacturer has determined that this condition is a result of the reinforcing doubler being too close to the flange.

What Is the Potential Impact if FAA Took No Action?

This condition, if not detected and corrected, could result in failure of the engine mount. Such failure could result in the engine separating from the airplane and lead to loss of control of the airplane.

Has FAA Taken Any Action to This Point?

We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all Pilatus Britten-Norman BN-2, BN-2A, BN-2B, BN-2T, and BN2A MK. III series airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on August 22, 2002 (67 FR 54384). The NPRM proposed to require you to repetitively inspect the bottom corner of the engine mount bracket for cracks, replace any cracked bracket, return the removed bracket(s) to Pilatus Britten-Norman, and report the return to FAA.

Are There Differences Between This AD, the Service Information, and the CAA AD?

The CAA AD and the service information allow continued flight if cracks are found in the engine mount bracket that do not exceed certain limits. The applicable service bulletin specifies replacement of the engine mount bracket only if cracks are found exceeding this limit, as does CAA AD 005-11-2001. This AD does not allow continued flight if any crack is found. FAA policy is to disallow airplane operation when known cracks exist in primary structure, unless the ability to sustain ultimate load with these cracks is proven. The engine mount bracket is considered primary structure, and the FAA has not received any analysis to prove that ultimate load can be sustained with cracks in this area.

Is There a Modification I Can Incorporate Instead of Repetitively Inspecting the Engine Mount Brackets?

The FAA has determined that long-term continued operational safety will be better assured by design changes that remove the source of the problem rather than by performing repetitive inspections. With this in mind, we will continue to work with Pilatus Britten-Norman in collecting information to determine whether a future design change may be necessary.

Was the Public Invited To Comment?

The FAA encouraged interested persons to participate in the making of this amendment. We did not receive any comments on the proposed rule or on our determination of the cost to the public.

FAA's Determination

What is FAA's Final Determination on This Issue?

After careful review of all available information related to the subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. We have determined that these minor corrections:

–Provide the intent that was proposed in the NPRM for correcting the unsafe condition; and
–Do not add any additional burden upon the public than was already proposed in the NPRM.

Cost Impact

How Many Airplanes Does This AD Impact?

We estimate that this AD affects 126 airplanes in the U.S. registry.

What Is the Cost Impact of This AD on Owners/Operators of the Affected Airplanes?

We estimate the following costs to accomplish the inspection for BN-2, BN-2A, BN-2B, and BN2A MK. III series airplanes:

Labor cost	Parts cost	Total cost per airplane
4 workhours x $60 per hour = $240	$10	$250

We estimate the following costs to accomplish the inspection for BN-2T series airplanes:

Labor cost	Parts cost	Total cost per airplane
8 workhours x $60 per hour = $480	$10	$490

We estimate the following costs to accomplish any necessary replacements for BN-2, BN-2A, BN-2B, and BN-2T series airplanes that will be required based on the results of the inspection. We have no way of determining the number of airplanes that may need such replacement:

Labor cost	Parts cost per bracket	Total cost per bracket
48 workhours x $60 per hour = $2,880 per bracket (2 brackets per engine, 2 engines per airplane).	$1,295	$2,880 + $1,295 = $4,175.

We estimate the following costs to accomplish any necessary replacements for BN2A MK. III series airplanes that will be required based on the results of the inspection. We have no way of determining the number of airplanes that may need such replacement:

Labor cost	Parts cost per bracket	Total cost per bracket
48 workhours x $60 per hour = $2,880 per bracket (2 brackets per engine, 2 engines per airplane).	$714	$2,880 + $714 = $3,594.

What Is the Compliance Time of This AD?

The compliance time of this AD is "within the next 500 hours time-in-service (TIS) or within the next 24 calendar months after the effective date of this AD, whichever occurs first."

Why Is The Compliance Time of This AD Presented in Both Hours TIS and Calendar Time?

We have established the compliance time of this AD in both hours TIS and calendar time. The unsafe condition is dependent upon repetitive airplane operation. However, the recommended maintenance program specifies other actions in this area at intervals not to exceed 2 years. Therefore, the compliance time will ensure that high-time airplanes are inspected within a certain amount of hours TIS and the lower time airplanes would be inspected at the next maintenance event in the affected area. We have determined that this compliance time:

–Will ensure that the unsafe condition is addressed in a timely manner on all affected airplanes; and
–Will not inadvertently ground any of the affected airplanes.

Regulatory Impact

Does This AD Impact Various Entities?

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

Does This AD Involve a Significant Rule or Regulatory Action?

For the reasons discussed above, I certify that this action (1) is not a significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. FAA amends § 39.13 by adding a new AD to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-22-02 Pilatus Britten-Norman Limited: Amendment 39-12926; Docket No. 2002-CE-21-AD.

(a) *What airplanes are affected by this AD?* This AD affects the following airplane models, all serial numbers, that are certificated in any category:

Models

BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27, BN-2T, BN-2T-4R, BN2A MK. III, BN2A MK. III-2, BN2A MK. III-3

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the airplanes identified in paragraph (a) of this AD must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to detect and correct cracks in the engine mount bracket. Such a condition could cause the engine mount assembly to fail, which could result in the engine separating from the airplane and lead to loss of control of the airplane.

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
(1) Inspect the bottom corner of the engine mount bracket between the attachment flange and the main part of the bracket for cracks: (i) If cracks are found during any inspections, replace the bracket with a new bracket and continue with the repetitive inspection requirements of this AD; (ii) If no cracks are found during any inspection, continue with the repetitive inspection requirements of this AD.	Initially inspect within the next 500 hours time-in-service (TIS) or within the next 24 calendar months after December 20, 2002 (the effective date of this AD), whichever occurs first, and repetitively inspect thereafter at intervals not-to-exceed 500 hours TIS or 1,000 landings, whichever occurs first. Replace cracked bracket prior to further flight after the inspection in which the crack is found.	In accordance with Pilatus Britten Norman Service Bulletin SB 275, Issue 1, dated November 30, 2001.

(2) Send the removed brackets to the Engineering and Design Authority, B–N Group Ltd. and report the return to FAA. The Office of Management and Budget (OMB) approved the information collection requirements contained in this regulation under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*) and assigned OMB Control Number 2120–0056.	Within 10 days after removing the bracket or within 10 days after December 20, 2002 (the effective date of this AD), whichever occurs later.	Send the removed brackets to B–N Group Limited, Bembridge, Isle of Wight, United Kingdom P035 5PR, and report the return to Doug Rudolph, FAA, at the address in paragraph (f) of this AD.

(e) *Can I comply with this AD in any other way?* You may use an alternative method of compliance or adjust the compliance time if:

(1) Your alternative method of compliance provides an equivalent level of safety; and

(2) The Standards Office Manager, Small Airplane Directorate, approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Standards Office Manager.

Note 1: This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(f) *Where can I get information about any already-approved alternative methods of compliance?* Contact Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

(g) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(h) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with Pilatus Britten Norman Service Bulletin SB 275, Issue 1, dated November 30, 2001. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may get copies from B-N Group Limited, Bembridge, Isle of Wight, United Kingdom PO35 5PR; telephone: +44 (0) 1983 872511; facsimile: +44 (0) 1983 873246. You may view copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Note 2: The subject of this AD is addressed in the United Kingdom CAA-AD Number 005-11-2001, not dated.

(i) *When does this amendment become effective?* This amendment becomes effective on December 20, 2002.

Issued in Kansas City, Missouri, on October 22, 2002.

David R. Showers,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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